

Claims:

We claim :

- 1) A process for preparing of losartan potassium comprising
 - a) Reacting 2-n-butyl- 4-chloro 1H-imidazole 5-carboxaldehyde with N-(triphenylmethyl)-5-[4'-(bromomethyl) biphenyl-2-yl]] tetrazole in a biphasic solvent system comprising water and an organic solvent in the presence of a base and a phase transfer catalyst at ambient temperature to reflux temperature of the solvent for sufficient time to form an intermediate;
 - b) Separating the layers and diluting the organic layer containing the intermediate with an alcoholic co-solvent and reducing with sodium borohydride at -10 to 20°C for 2 hours;
 - c) Diluting the reaction mixture with water to precipitate trityl losartan;
 - d) Stirring the trityl losartan in an alcoholic solvent in the absence of acid or base catalysts at ambient temperature to reflux temperature of the solvent for sufficient time to effect deprotection;
 - e) Distillation of the alcoholic solvent under reduced pressure to give a residue, which is mixed with an organic solvent (A) to precipitate losartan;
 - f) Suspending losartan in an organic solvent (B) capable of forming an azeotrope with water and treating with aqueous potassium hydroxide solution to provide a solution, to which another organic solvent (C) may optionally be added;
 - g) Distilling the solution to remove water as an azeotrope, till water content in the mixture is reduced below 0.1% to allow crystallization of losartan potassium in polymorphic form I;
 - h) Cooling the mixture to ambient temperature and isolating losartan potassium polymorph I by filtration.
- 2) The process of claim 1, wherein the alcoholic co-solvent used is selected from any of C1-C4 alcohols.
- 3) The process of claim 1, wherein C1-C4 alcohol solvent is selected from methanol, ethanol, propanol, isopropanol, n-butanol, iso butanol and tert-butanol
- 4) Process of claim 2, wherein the alcohol used is methanol.
- 5) Process of claim 2, wherein the alcohol used is ethanol.
- 6) The process of claim 1, wherein the reflux temperature of the solvent is maintained for 4-6 hours.
- 7) The process of claim 1, wherein the organic solvent of the biphasic solvent system in step a) is selected from the hydrocarbon solvents comprising of toluene, xylene, pentane, octane, cyclohexane and like.

- 8) The process according to claim 7, wherein the preferred organic solvent is toluene.
- 9) Process of claim 1 wherein the phase transfer catalyst in step a) is selected from the group of tetra alkyl ammonium halides other than aliquat-336 or tetra alkyl phosphonium halides excluding tetra butyl phosphonium bromide.
- 10) The process according to claim 9, wherein the preferred phase transfer catalyst is tetra butyl ammonium bromide.
- 11) The process of claim 1, wherein the base used in step a) is selected from alkali metal hydroxides.
- 12) The process of claim 1, wherein the base used in step a) is selected from alkali metal carbonates.
- 13) Process of claims 1, wherein the organic solvent (A) is selected from toluene, ethyl acetate, acetonitrile, acetone, 2-butanone, dichloromethane, isopropyl ether and like.
- 14) A process of claims 1, wherein addition of organic solvent (A) precipitates free losartan.
- 15) The process of claims 1, wherein losartan potassium is isolated from the solution by distillation of water with one or more solvents, which are capable of forming azeotrope with water.
- 16) Process of claims 1, wherein the organic solvent B capable of forming azeotrope is selected from acetonitrile, ethyl acetate, acetone, 2-butanone, toluene and like.
- 17) The process of claims 1, wherein the 0.98-1 equivalent of potassium hydroxide is used to obtain losartan potassium.
- 18) Process of claims 1, wherein the organic solvent C is selected from isopropyl ether, ethanol and like.

- 19) Process of claim 1, wherein the ternary azeotrope system obtained is acetonitrile-isopropyl ether-water when acetonitrile is used as solvent B and isopropyl ether is used as solvent C.
- 20) Process of claim 1 step f), wherein the ternary azeotrope system obtained when 2-butanone is used a solvent B and ethanol is used as solvent C, is 2-butanone-ethanol-water.
- 21) A process of claim 1, wherein the suspension obtained in step d) is treated with aqueous potassium hydroxide solution to obtain a two-phase liquid containing losartan potassium in water and trityl byproduct in organic solvent.
- 22) A process of claims 1 and 21, wherein the by-product is separated by extracting into organic solvent that is capable of dissolving trityl by product but immiscible with water.
- 23) A process according to claim 22, wherein the organic solvent used is aromatic solvents such as toluene, halogenated solvents such as dichloromethane and ethereal solvents such as isopropyl ether and ester solvents such as ethyl acetate and like.
- 24) A process according to claim 1, wherein one or more organic solvents capable of forming azeotrope with water is added to the solution of losartan potassium in water.
- 25) A process according to claims 1 and 24, wherein liquid mixture is distilled to remove water as an azeotrope till water content in the mixture is less than 0.1% to allow crystallization of losartan potassium in polymorphic form I.
- 26) A process according to claim 25, wherein the organic solvent is selected from acetonitrile, ethyl acetate, isopropyl ether and toluene.
- 27) A process according to claim 1, wherein distillation in step g) is continued till water content in the mixture is less than 0.1% to allow crystallization of losartan potassium in polymorphic form I.